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**An investigation into the influence of level of extroversion,
locus of control and gender on listening and reading proficiency
in Second Language Acquisition**

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Summary

Introduction

The field of Second Language Acquisition (SLA) has, from its very inception, been devoted to the task of investigating the way in which the individual learner gains mastery over a foreign language. While Stephen Krashen (1985) sought to provide a general mechanism to describe this process, research began to drift in the direction of the individual learner, and it was the seminal work by Peter Skehan (1989) which acted as a catalyst for the development of research into individual learner differences. Today, these differences range from the conventional (such as socio-economic status, attitude and motivation) to the bizarre (religious orientation).¹ This research project is devoted to an investigation into the way in which three of these differences relate to each other and, more importantly, the way in which it might be claimed that they impact on the levels of proficiency of advanced language learners in Polish higher education. The variables chosen for investigation are: gender, both because of the high incidence of females studying languages at university level, and the persistently reported belief that females outperform males in language learning (see Arabski 1999, as an exemplary study on this question); level of extroversion, because it has been indicated by Ehrman (2008) that successful language learners have a slight tendency to introversion; and Locus of Control (LOC), which remains a relatively unstudied variable in the field of SLA, but there is evidence (see Lefcourt 1982) to suggest that success in higher education is predicted by an internally orientated LOC. In determining the proficiency of the participants, it was decided to focus on the receptive skills of speaking and listening. The reason for this is firstly that it is difficult to quantify oral and written performance in a consistent and reliable manner which would lend itself to quantitative analysis, and also because reading and listening tests play a key part in the assessment of the levels of attainment of language learners.

The work may be split into two main sections, which are further subdivided into two parts, giving a total of four chapters. The first part confirms the taxonomy used throughout thesis and then provides a general overview of the development of the field of SLA in order to provide the overall context into which the present study fits. The second chapter of the work is devoted to an investigation of the historical development

¹ For the investigation into the relationship between anxiety, locus of control, gender and religious orientation see Rastegar, Heidari and Razmi (2013).

and current state of research into the various learner differences. As well as focusing on the three differences which form our main point of investigation, other variables are included as it was deemed essential to demonstrate a full understanding of the incredibly intricate nature of the whole array of factors that are claimed to influence the L2 learning process as this would help in trying to ensure a relative level of homogeneity in the study population. Chapter three presents the research hypotheses and methodology, before presenting the results. Finally, Chapter four turns to a discussion of the results and a presentation of the overall conclusions and implications of the study.

Theoretical foundations

For the sake of brevity, we shall now turn our attention to establishing the theoretical foundations of the present project. As previously stated, the most important study is that conducted by Madeline Ehrman (2008) into successful language learners in Canada. Her conclusion was that, on the basis of a 16 type Myers Briggs personality test, the only type which was overly represented in the study was the introverted-intuitive type. Dewaele and Furnham (1999) suggested that different levels of extroversion have a tendency to benefit learners in different ways, with extroverts being more suited neurologically to tasks which rely on short-term memory – such as communication tasks, while introverts have greater recourse to long-term memory and are thus more likely to be successful in reflective tasks during which they have ample time to employ their full resources. When it comes to Locus of Control, the main studies in the field of SLA have been conducted by White (1999) and Hsieh and Schallert (2008), both of which indicated a positive correlation between internally orientated LOC and level of achievement. These results confirm earlier studies conducted by psychologists into the relationship between LOC and academic success (Bar-Tal and Bar-Zohar 1977). Finally, with gender, there are a number of studies (see, for example, Arabski 1999; Catalán 2003; or Piasecka 2010) which indicate that females have a better level of attainment than males, and enjoy greater long-term success in learning languages. Thus, there is ample support for the three main hypotheses which this study is intended to investigate.

Methodology

The three independent variables which the study is ascribed to investigate are level of extroversion, LOC and gender, and the dependent variables are average score in listening and reading exercises, and the following hypotheses were generated:

1. Introverts should have, in general, a higher level of achievement in reading exercises, with the average result of the male portion of the sample population being higher than the female portion.
2. Extroverts should have, in general, a higher level of achievement in listening exercises, with the average result of the female portion of the sample being higher than the male portion.
3. When examining the results of those with higher scores in both listening and reading (general level of proficiency), one would expect the prototypical profile to be a female learner with a tendency towards introversion with an internally orientated locus of control.

In addition to this, there are six minor questions to be addressed as side-issues:

1. What is the level of introversion/extroversion of the sample population?
2. What is the correlation between gender and level of extroversion of the sample population?
3. What is the orientation of locus of control of the sample population?
4. What is the correlation between gender and orientation of locus of control of the sample population?
5. What is the relationship between locus of control and the level of extroversion of the sample population?
6. What is the relationship between reading and listening achievement in the sample population?

The study population consisted of 102 students enrolled in master's degree programme in the Institute of English Studies at the University of Rzeszow. This population was chosen in part for the high degree of assumed homogeneity compared to other potential populations, and in part because of the possibility of having direct access to the group over an extended period of time.

In terms of the study design, instead of just sticking to a basic quantitative study (with the inherent failings involved in such a design), it was decided to adopt a sequential explanatory mixed method approach, which involves the use of both a quantitative study followed by a qualitative investigation. This allows for the qualitative

interviews to be used in an explanatory way to provide further or alternative explanations to the quantitative results (Creswell 2014:224).

The quantitative stage was conducted over the course of a 15 week academic semester, during the course of which the students were subjected to ten listening and ten reading tasks,² the results of which were recorded using a self-paced polling system and audience response cards. This lengthy process was intended to eliminate the effects of bad weather or the poor mood of the participants on a specific occasion, thus giving an accurate reflection of their actual levels of proficiency. In between time, the students were asked to complete the Drwal (1995) 29 question Social Reaction Inventory in order to determine the orientation of LOC, and the Eysenck Personality Questionnaire – Revised in order to determine the level of extroversion. The qualitative stage was based on a self-composed 34-question interview designed to act as both a supplement to the original investigation, and also to provide greater biographical information about the participants. The interviews were conducted in the winter recess immediately following the end of the semester during which the quantitative stage was conducted. From the original study population of 102 fifteen participants were chosen for the second stage using the following selection criteria: two males and two females with high extroversion but differing scores; two males and two females with low extroversion but contrasting scores; one male and one female with high reading and low listening scores; one male and one female with high listening and low reading scores; and three participants who best matched the main hypotheses.

Results

The data was first subject to some basic analysis, and the arithmetic means were calculated for the four quantitative data sets generated (Table 1), and then the Spearman Coefficient was calculated in order to determine the correlation between the variables (Tables 2 and 3). Finally, the data was subject to ANOVA regression analysis in order to test the validity of the proposed hypotheses (Tables 4 and 5). This information is displayed below –

² The exercises were taken from the following three sources: *Objective Proficiency 2nd Ed.* (2013), *Proficiency Testbook 1* (2012) and *Proficiency Testbuilder 4th Edition* (2013).

Gender		avarage reading %	avarage listening %	LOC (1-29)	Level of extroversion (1-10)
F	MEAN	73.01	70.28	14.51	4.43
	MEDIAN	73.50	72.50	14.00	5.00
	N	76	76	76	76
	STANDARD DEVIATION	16.275	14.578	4.110	2.125
	MINIMUM	40	30	4	1
	MAXIMUM	100	96	23	10
M	MEAN	76.62	74.38	13.81	4.00
	MEDIAN	73.50	75.50	14.00	3.50
	N	26	26	26	26
	STANDARD DEVIATION	10.241	9.745	4.454	2.530
	MINIMUM	57	56	6	1
	MAXIMUM	96	95	26	10
GENERAL	MEAN	73.93	71.32	14.33	4.32
	MEDIAN	73.50	74.00	14.00	4.00
	N	102	102	102	102
	STANDARD DEVIATION	15.004	13.585	4.189	2.230
	MINIMUM	40	30	4	1
	MAXIMUM	100	96	26	10
Mann-Whitney u test (p)		.265	.392	.286	.355

Table 1. Averages for reading score, listening score, LOC and level of extroversion expressed according to gender.

FEMALES			Level of extroversion (1-10)	LOC (1-29)	avarage listening %	avarage reading %
Spearman rho	Level of extroversion (1-10)	Correlation coefficient	1.000			
		Significance	.			
		N	76			
	LOC (1-29)	Correlation coefficient	-.214	1.000		
		Significance	.063	.		
		N	76	76		

Spearman rho	avarage listening %	Correlation coefficient	.043	-.014	1.000	
		Significance	.710	.901	.	
		N	76	76	76	
	avarage reading %	Correlation coefficient	-.093	.155	.489**	1.000
		Significance	.425	.182	.000	.
		N	76	76	76	76

Table 2. Spearman correlations for the female population.

MALES		Level of extroversion (1-10)	LOC (1-29)	avarage listening %	avarage reading %	
Spearman rho	Level of extroversion (1-10)	Correlation coefficient	1.000			
		Significance	.			
		N	26			
	LOC (1-29)	Correlation coefficient	.093	1,000		
		Significance	.651	.		
		N	26	26		
	avarage listening %	Correlation coefficient	-.220	-.069	1.000	
		Significance	.281	.739	.	
		N	26	26	26	
	avarage reading %	Correlation coefficient	.356	-.013	.039	1.000
		Significance	.075	.950	.850	.
		N	26	26	26	26

Table 3. Spearman correlation for the male population.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Significance
		B	Standard Error	Beta		
1	(Constant)	66.641	6.614		10.076	.000
	Gender	3.897	3.437	.114	1.134	.260
	Level of extroversion (1-10)	-.068	.679	-.010	-.101	.920
	LOC (1-29)	.460	.361	.128	1.274	.206

Table 4. Coefficients for the relationship between the independent variables and average reading score.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Significance
		B	Standard Error	Beta		
1	(Constant)	69.192	6.014		11.504	.000
	Gender	4.132	3.126	.133	1.322	.189
	Level of Extroversion (1-10)	-.131	.617	-.022	-.213	.832
	LOC (1-29)	.115	.328	.035	.350	.727

Table 5. Coefficients for the relationship between the independent variables and average listening score.

In short, the results indicate that there is no significant correlation between the individual variables in either the male or female populations, the ANOVA regression analysis indicates that the β coefficient is insignificant in all cases, meaning that neither level of extroversion, LOC or gender can be said to be accountable for level of proficiency in either reading or listening. Thus, on the basis of the quantitative analysis, it is necessary to state a null result.

When we turn our attention to the qualitative analysis, in brief, it may be stated that the age of onset was similar for the majority of the population, and had no relationship to the average reading or listening score, and the same is true for level of exposure – which is held to be a reliable predictor of success in L2 acquisition. From the remaining, it would appear that there are three observations that are worth mentioning here, the first two of which seem to have a direct correlation to success. The first of which is the professional activities of the students – those who work would appear to have better scores than those who do not. Secondly, those who show a range of carefully selected learning strategies had, in general, better results than those who had more limited ways of learning. Finally, it would appear that there was a general

drop in motivation as the students carried on through their studies, but there seemed to be no correlation between sustained motivation and level of achievement.

Ultimately, the results do raise more questions than they answer. It would appear, however, that in advanced students of language, performance is not related to personality factors or gender, indicating that previous claims either apply to learners of lower levels of attainment, or the results are valid for different populations. It is strongly recommended that a larger scale long-term study be conducted which would allow for the inclusion of a greater number of variables and a more comprehensive insight into the mechanism which determine success or failure in the language acquisition process.